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Enhancement of electrode design for non-invasive stimulus application (Conference Paper)

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Abstract

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Existing electrodes can be classified into two categories which are invasive and non-invasive electrodes. The non-invasive electrodes can be further classified into wet or dry electrodes. Most of the off-the-shelf electrodes are made from rigid substrates which have the high level of motion artifacts. To overcome this motion artifact, flexible electrodes have been slowly introduced in the market. Flexible electrodes can be made from various types of material such as the substrate. This paper presents a work on designing a new flexible dry electrodes using poly(3,4-ethylenedioxythiophene) polystyrene sulfonate and silver by means of dispenser printing technology. Polyester cotton fabric was selected as the substrate in this electrode designed. Results from the experiment show that the conductivity of the proposed flexible electrode is comparable with the conventional pre-gelled electrode when applied to an electrical stimulator device. Eight out of ten subjects under test described no difference in comfort between the proposed electrodes and pre-gelled electrodes. © 2017 IEEE.

SciVal Topic Prominence

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Author keywords

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Indexed keywords

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